UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,547	05/30/2001	Stephen G. Perlman	50588/357	8928

32641	7590	10/06/2005	EXAMINER

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EXAMINER
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ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) *17-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-12,14, 16 and 26-29* is/are rejected.

7)☒ Claim(s) *4,13 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *See cont. sheet.*

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Continuation of Information Disclosure Statement: 8/9/01,10/28/02, 5/29/03

DETAILED ACTION

Election/Restrictions

1.   Restriction to one of the following inventions is required under 35 U.S.C. 121:

     I.   Claims 1-16, 26-29, drawn to method for efficiently transmitting streams by defining packet sizes for distribution, classified in class 725, subclass 146.

     II.   Claims 17-25, drawn to a method of transmitting streams using different frequency ranges to support legacy devices and using an alternate frequency for an alternate group of receivers, classified in class 725, subclass 126.

The inventions are distinct, each from the other because of the following reasons:

2.   Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as distributing files over a computer network. See MPEP § 806.05(d).

3.   Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4.   Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

5.   During a telephone conversation with Kory Christensen on 21 September 2005 a

provisional election was made without traverse to prosecute the invention of group I,

claims 1-16 and 26-29. Affirmation of this election must be made by applicant in

replying to this Office action. Claims 17-25 are withdrawn from further consideration by

the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

6.   Claims 3, 16, and 29 are objected to because of the following informalities:

Claim 3 recites, "packet size is further based a number," which appears to be a

typographical error. For the rest of this Office Action, claim 3 will be interpreted as,

"packet size is further based on a number."

Claim 16 recites the limitation "said predetermined period of time" in line 1.

There is insufficient antecedent basis for this limitation in the claim. Upon reviewing the

specification, it is undefined which period of time the applicant is intending to claim. For

the rest of this Office Action, "said predetermined period of time" will be treated as "a

period of time."

Claim 29 recites the limitation "said hard drive" in line 1. There is insufficient

antecedent basis for this limitation in the claim. For the rest of this Office Action, "said

hard drive" will be treated as "said mass storage device."

7.   Appropriate correction is required.

Allowable Subject Matter

8.   Claims 4, 13, 15 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 6-9, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated

by U.S. Patent 6,701,528 to Arsenault et al. (Arsenault).

Regarding claim 1, Arsenault teaches an on-demand system, which staggers

programs during transmission, such as shown in figure 8a (col. 11-12, II. 57-7). As

shown in figure 8A, Arsenault teaches concurrently transmitting packets for each

multimedia stream to one or more multimedia receivers (col. 4, II. 43-47, col. 5, II. 10-18,

col. 11, II. 45-56), Arsenault teaches storing the storing a plurality of channels in parallel

(col. 11, II. 45-56), which equates to continually storing said multimedia streams on said

mass storage device. Arsenault teaches playing back the content in order to permit the

subscriber to fast forward and rewind while viewing the retrieved pre-stored segment

(col. 12, II. 29-34), which equates to playing back multimedia content from said mass storage devices responsive to a user tuning to a particular multimedia stream when a delay is greater than a minimum acceptable time would otherwise result waiting for a next packet containing data for said particular multimedia stream to arrive. The system of Arsenault inherently defines a minimum acceptable time for rendering a multimedia stream to a user when said user selects a particular stream (such as a fast-forward or rewind stream), wherein the time is less than the time to wait for the trick play information to be streamed to the user. Additionally, the system of Arsenault inherently defines a packet size for packets containing data for each multimedia stream, wherein the packet size is defined based on one or more performance characteristics of mass storage devices on said one or more multimedia receivers, by the mere fact that the data of Arsenault is stored and retrieved from the multimedia receivers.

Regarding claim 3, Arsenault teaches receiving a data received (col. 5, II. 40-59) and storing the data onto a mass storage device (col. 11, II. 45-56), wherein the data is stored at a rate greater than a single stream (col. 12, II. 29-34), the system of Arsenault inherently defines packet sizes based on a number of said packets which said multimedia receivers are capable of buffering in memory before storing said packets to said mass storage devices in order to provide a system that does not lose packets due to buffer overflows.

Regarding claim 6, Arsenault teaches a simultaneous transmission of a plurality

of channels (claimed simulcasting – see fig. 8A) using packets of the same size (second

defined packet size), wherein the receivers are adapted to process the second defined

packet sizes.

Regarding claim 7, Arsenault teaches transmitting video to subscribers using

MPEG packets (col. 5, ll. 40-59), which equates to transmitting a plurality of packets of a

specified size to a plurality of multimedia receivers. Arsenault teaches that for fast-

forward and rewind functionality that the program can be downloaded rapidly to the user

(col. 12, ll. 29-34) which equates to, each of said plurality of packets containing content

for one of a plurality of multimedia streams, wherein the delay in time between two

successive packets is greater than a minimum defined speed for displaying said one

multimedia stream for an end user.

Regarding claim 8, Arsenault teaches playing back the content in order to permit

the subscriber to fast forward and rewind while viewing the retrieved pre-stored

segment (col. 12, ll. 29-34), which reads on playing back from a mass storage device on

the receiver responsive to the selecting said stream for playback.

Regarding claim 9, the system of Arsenault inherently defines a packet size

based on one or more performance characteristics of mass storage devices on said one

or more multimedia receivers, by the mere fact that the data of Arsenault is stored and

retrieved from the multimedia receivers.

Regarding claim 11, Arsenault teaches a simultaneous transmission of a plurality

of channels (claimed simulcasting – see fig. 8A) using packets of the same size (second

defined packet size), wherein the receivers are adapted to process the second defined

packet sizes.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

11.   Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent 6,701,528 to Arsenault et al. (Arsenault) in view of U.S. Patent 5,930,493 to

Ottesen et al. (Ottesen).

Regarding claim 2, Arsenault teaches storing data on mass storage devices, but

Arsenault is silent on a performance characteristic is the seek time capability of said

mass storage devices. Official Notice is taken that a seek time capability of said mass

storage device is well known in the art. Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify Arsenault by considering features of a device to be implemented such as a seek time capability of said mass storage devices in order to efficiently send data to and from a mass storage device without encountering buffer over-run/under-run errors thereby increasing the robustness of the system.

Regarding claim 10, Arsenault teaches storing data on mass storage devices, but Arsenault is silent on a performance characteristic is the seek time capability of said mass storage devices. Official Notice is taken that a seek time capability of said mass storage device is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Arsenault by considering features of a device to be implemented such as a seek time capability of said mass storage devices in order to efficiently send data to and from a mass storage device without encountering buffer over-run/under-run errors thereby increasing the robustness of the system.

12.   Claims 5, 12, 14, 16, and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,701,528 to Arsenault et al. (Arsenault) in view of U.S. Patent 5,930,493 to Ottesen et al. (Ottesen).

Regarding claim 5, Arsenault teaches the data packets being 147 bytes long (col.

8, ll. 34-37, fig. 4B). In analogous art, Ottesen teaches that sending 4 or 5 video

segments within a single video packet wherein increasing the size of packets within a

network provides the benefits of reducing the cost of the multimedia server in that fewer

packet transmission are needed for transmitting the same amount of data (col. 19, ll. 40-

61). Therefore, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to modify Arsenault by grouping packets of data as taught by

Ottesen in order to reduce the cost of the multimedia server (Ottesen: col. 19, ll. 40-61).

Regarding claim 12, Arsenault teaches storing multimedia content on a hard

drive at the receiver (col. 6-7, ll. 55-9, col. 12, ll. 29-34) and playing back the content

from the hard drive responsive to the user using fast forward/rewind (claimed tuning to a

stream carrying said multimedia content), which equates to playing content from the

hard drive when the delay greater than a required channel tuning speed would

otherwise result if said multimedia content were not played back from the hard drive, in

that the system of Arsenault already has the content available for display. Arsenault

teaches transmitting MPEG streams, which inherently have PIDs as per the MPEG

specification, but is silent on for each multimedia stream, combining multimedia content

contained in a plurality of PID packets into a single packer of a specified size. In

analogous art, Ottesen teaches that sending 4 or 5 video segments within a single video

packet wherein increasing the size of packets within a network provides the benefits of

reducing the cost of the multimedia server in that fewer packet transmission are needed

for transmitting the same amount of data (col. 19, ll. 40-61). Therefore, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to

modify Arsenault by grouping packets of data as taught by Ottesen in order to reduce

the cost of the multimedia server (Ottesen: col. 19, ll. 40-61).

Regarding claim 14, Arsenault and Ottesen are silent on determining a packet

size based on a bit-rate at which said content is transmitted. Official Notice is taken that

changing packet sizes based on bit-rates is well known in the art, such as changing

packet sizes for a variable bit-rate (VBR) MPEG signal. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify

Arsenault and Ottesen by changing packet sizes based on bit-rates in order to efficiently

transmit data and reducing side effects such as buffer overflows.

Regarding claim 16, Arsenault teaches displaying video, which is a period of time

less than .25 seconds.

Regarding claim 26, Arsenault teaches storing multimedia content on a hard

drive at the receiver (col. 6-7, ll. 55-9, col. 12, ll. 29-34) and playing back the content

from the hard drive responsive to the user using fast forward/rewind (claimed tuning to a

stream carrying said multimedia content), which equates to playing content from the

hard drive when the delay greater than a required channel tuning speed would

otherwise result if said multimedia content were not played back from the hard drive, in

that the system of Arsenault already has the content available for display. Arsenault teaches transmitting MPEG streams, which inherently have PIDs as per the MPEG specification, but is silent on for each multimedia stream, combining multimedia content contained in a plurality of PID packets into a single packer of a specified size. In analogous art, Ottesen teaches that sending 4 or 5 video segments within a single video packet wherein increasing the size of packets within a network provides the benefits of reducing the cost of the multimedia server in that fewer packet transmission are needed for transmitting the same amount of data (col. 19, ll. 40-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Arsenault by grouping packets of data as taught by Ottesen in order to reduce the cost of the multimedia server (Ottesen: col. 19, ll. 40-61).

Regarding claim 27, Arsenault teaches receiving data packets at the receiver, clearly the receiver buffer is smaller than that required to concurrently buffer all (claimed at least one) of said plurality of packets for each of said plurality of streams in that the purpose of the storage device is to store the larger files.

Regarding claim 28, Arsenault teaches storing data on the storage device (col. 6-7, ll. 55-9, col. 11, ll. 45-56, col. 12, ll. 29-34), which equates to buffering said data for said plurality of streams on a mass storage device.

Regarding claim 29, Arsenault teaches playing back the content in order to permit the subscriber to fast forward and rewind while viewing the retrieved pre-stored segment (col. 12, ll. 29-34), which equates to playing back multimedia content from said mass storage devices responsive to a user tuning to a particular multimedia stream when a delay is greater than a minimum acceptable time would otherwise result waiting for a next packet containing data for said particular multimedia stream to arrive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Y. Koenig whose telephone number is (571) 272-7296. The examiner can normally be reached on M-Th (7:30 - 6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

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